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THE CARRY - OVER VALUE OF HIGH SCHOOL GIRLS PHYSICAL ACTIVITIES

THESIS

Submitted by

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THE CARRY - OVER VALUE OF HIGH SCHOOL GIRLS PHYSICAL ACTIVITIES

CHAPTER I

Introduction

> "Perhaps the outstanding development in physical education during the past few decades has been a broadening philosophy which now centers attention on the effect of physical activities on the entire personalities of pupils rather than solely their effect on muscles, circulation, respiration and other bodily functions. Whereas programs of so-called 'physical training' prevalent in the early 1900's, limited their objectives to the development of strength, neuro-muscular coordination, posture, and physical endurance, present day programs add to these attention to recreative interests and skills and to the social values resulting from pupils' learning to play with each other, to give and take, to choose and respect leaders, and obedience to rules of the game."1/

"Physical education contributes to health, strength, and physical fitness; to social education; and to the development of enduring interests and skills."2/ Of the three objectives the following was chosen for its correlation to this study:

> "To teach the skills of many types of activities and provide sufficient opportunity to use these skills so that a reasonable degree of proficiency, which will encourage participation outside of school and in the years following the completion of school, can be attained."3/

> Cobb4/ states the same in a slightly different manner, that, "Physical education should contribute to the growth of the individual as an integrated personality by discovering the health and recreational and personality needs

1/ American Association of School Administrators. Health in Schools, Twentieth Yearbook, 12012 Sixteenth Street, Northwest, Washington 6, D. C., Feb. 1942, p. 106

2/ Ibid., 107

3/ Ibid., 107

4/ L. S. Cobb. A Study of the Functions of Physical Education in Higher Education, Bureau of Publications, Teachers College Columbia University, N. Y. 1943, p. 6

of each student and helping him to meet these needs through the activity program."

Meaning of Carry-over

The term as referred to in this study involves the use of those enduring interests and skills which encourage the individual to participate in any physical activity. This involves either, first, the desire and will of the individual to participate in the physical activity, or second, the actual participation. Simply, transfer and continue to take part in those physical activities in which some degree of proficiency and joy have been developed through participation during the school years. Should such a transfer take place its aid to wise-use of leisure time, recreation and the solving of juvenile delinquency would be indispensible.

Carry-over Value of Physical Education vs. Wise-Use of Leisure Time and Recreation (Juvenile Delinquency)

"Leisure, we shall use according to the definition of some students as the time surplus remaining after practical necessities of life have been attended to."1/ The problem then arises when the use of this time surplus becomes apparent that for some reason individuals tend not to put their leisure to good use.

"Whatever may be said of youth attitudes, the use of leisure in modern days has taken on great significance because the amount of time which must be devoted to earn-

1/ H. L. May and D. Petgen. Leisure and Its Use, A. S. Barnes and Company, N. Y. 1928, p. 3

ing a living is constantly decreasing. Young people are particularly aware of this fact because they enter the world of work much later in life than did their grandfathers and grandmothers, or even their mothers and fathers. When they do succeed in making an entry, they are likely to find themselves performing over and over a simple task which gives them little personal sense of achievement and makes satisfactory use of leisure a necessity."1/ "Therefore, an important function of education and (physical education, for it is a part of general education) in the use of leisure and in the development of interests and skills for recreation is to provide a sense of direction."2/

"What is recreation? To define recreation is more difficult than might be supposed, for one man's recreation can be another man's work. Perhaps as good a definition as any is the simple one that recreation is what a person finds pleasure in doing when he is not paid for it and does not feel any other kind of obligation to do it. Recreation implies freedom of choice and action and has the quality of bringing immediate personal satisfaction. It is sought for its own sake. Its direct and immediate values are as important as the indirect benefits it confers."3/ Honorable Paul V. McNutt4/ goes on to say that 'Recreation is a term that is now quite widely understood. We must agree though, that recreation is an attitude of mind rather than a form of activity. Practically speaking, however, recreation is leisure activity engaged in for its own sake.'

It is the principal opportunity of many people for expressive, joyous living.

By helping the individual to develop inner resources it enables him not only to live in a satisfying way under the normal responsibilities and stresses of existance, but also the

1/ C. G. Wrenn and D. L. Harley. Time on Their Hands, American Council on Education, Washington, D. C., 1941

2/ Ibid., p. 72

3/ Ibid.,(p.) foreword

4/ Honorable Paul V. McNutt. "Recreation and the National Moral" Recreation, (1939-40) 33;543

better to meet unusual or peak demands on his physique and on his mental and nervous reserves. Though habitual experience in leisure time activities that involve personal achievement, men and women develop high standards of what constitutes, satisfaction and heppiness in life."

"The year of 1945 has seen a new level in the total number of crimes committed over the nation. Statistics show a 12.4 percent increase over 1944 figures - the greatest increase in the past 15 years. F. B. I. Chief, J. Edgar Hoover, reports that of these new crimes the most alarming ones were committed by juvenile delinquents. Since 1939 arrests of teen-age girls under 18 have increased 198 percent. The total increase in juvenile delinquency is over 100 percent.

The appalling picture of our modern youth should be a serious challenge to teachers and recreation workers because recreation in all of its aspects can do much toward curbing this increase in juvenile delinquency. It will be necessary, however, to use a more realistic approach to this problem than in the past, and to plan programs thoughtfully in conjunction with other agencies--the school, the church, and the home.

In the past physical education programs have been developed in various school systems that emphasize game programs, but often no effort has been made to find out the type of programs being planned to provide for the individual's recreation needs. It is evident, therefore, that a meaningfulness is lost. Young people have a definite tentency to play those games and participate in those activities with which they are most familiar. To prove this ask any boy on any playground if he likes swimming, football, badminton, tennis, softball, and invariably his likes and dislikes will be contingent on his degree of skill and knowledge of the various activities. Ask a girl if she likes to sing, dance, crotchet, and you will find she likes those activities in which she has attained the greater degree of skill or with which she is most familiar.

If this is true why not have plans for school activities drawn upon a more realistic manner than in the past?

What has this to do with decreasing juvenile delin-

quency? Just this--make the programs so interesting that young people will want to follow their natural urges of play, free expression, competition and gregariousness.

When we attack these problems with an attitude of realism and not sentimentalism and provide those activities that are wholsome and appealing, then and not till then will we defeat the problem of juvenile delinquency."1/

"From the evidence available it appears that public schools are directly concerned with recreation whether they realize it or not. Both schools and recreation make a distinctive contribution to the education of child and adult; both contribute necessary aspects of education."2/

1/ Wendall A. Parris. "Recreation Versus Juvenile Delinquency" Recreation, (September, 1946) 40;313

2/ H. Clifton Hutchins. "School Facilities for Recreation" Recreation, (1940-1941) 34;706

CHAPTER II

Problem

Statement of the Problem.-- The problem of this study was to find the possible carry-over value of girls' physical activities in Salem High School.

Purpose of the Study

Through the compiled literature of this study and the information obtained by the questionnaire from former graduates of Salem High School, it was the purpose of this study:

(1) To disclose if possible the type of activities young girls engage in after completion of High School.

(2) To show which of these activities they learned in school and thus disclose if possible, the carry-over value of these physical activities.

If there is any carry-over value from these physical activities, where it is most evident. And does it tend to be more significant in group or individual physical activity?

(3) To find if possible, the evidence for a needed revised physical education program in High School.

(4) To disclose enough evidence which will show the need for an inter-city recreational program.

CHAPTER III

Scope and Limitations

The study includes 162 girls from three graduating classes of Salem High School, Salem, Massachusetts.

It was purposely limited to the graduating classes of 10, 6, and 3 years ago in order to distinguish the most active group of the three. And to note specifically, if there is carry-over value, in which group it is most evident.

Although the sample is somewhat limited, it is hoped the study will provide a basis for a beginning solution and have implications for further objective study.

The study does not propose to set up or bring forth a revised program of the high school girls' physical education curriculum, nor plan an organized program for a city-wide recreation program. However, it intends to make suggestions and recommendations which would be of assistance.

All the information and conclusions are based entirely upon the checked questionnaire, which was filed out to the best of the individual's recollection since graduation.

Upon completion it is the intention of this study to benefit all future girl students of Salem High School.

CHAPTER IV

PROCEDURE AND PROCUREMENT OF DATA

Procedure

Because this study began in the third year of the writer's transfer to the physical education department in the high school there seemed to be a question as to which approach would be most satisfactory.

The questionnaire method of research seemed like the most logical means of acquiring the necessary information for this study, since the writer was a new member of the faculty and not known by former graduates of the school.

The questionnaire, accompanied by a form letter, written on school stationery and explaining its purpose was mailed to graduates of three graduating classes from the high school.

A class of 10, 6, and 3 years ago was chosen for the purpose of noting whether recency of graduation would make a difference in the number and type of physical activities girls engaged in upon completion of high school.

A total of 454 questionnaires was mailed resulting in 162 replies: These 162 completed questionnaires were considered by the investigator to be a justifiable sampling of the three groups studied.

Procurement of Data

The entire tabulation of results was based on the information in the 162 questionnaires. Where there was a question

as to whether or not the item was answered correctly, it was omitted.

Each item in the questionnaire will be tabulated and discussed separately. Where necessary, the information will be shown in table form. There will be a comparison of tables and a discussion of the information as a whole, and finally the conclusions.

The 162 questionnaires proved a satisfactory sample since the classes do not range in large numbers at the high school.

CHAPTER V

Treatment of the Data

ITEM

1. How many years since graduation from high school:?

_____yrs.

Of the 454 graduates receiving the questionnaire, 67 replied as graduating 3 years ago: 50 graduating 6 years ago: and 45 graduating 10 years ago.

The following table will fully explain Item 1.

TABLE I

DISTRIBUTION AND PERCENTAGES OF REPLIES
TO QUESTIONNAIRE ON GIRLS' PHYSICAL ACTIVITIES
BY GRADUATES OF SALEM HIGH SCHOOL

Years Since Graduation	Forms Mailed	Forms Received	Per Cent
3	150	67	45
6	142	50	35
10	162	45	28
Totals	454	162	35

Table I shows the distribution and responses to the questionnaire on Girls' Physical Activities at Salem High School.

Approximately 35 per cent of the girl graduates of 3

graduating classes, namely a class of 10 years, 6 years, and 3 years ago, replied to the questionnaire.

According to recency of graduation groups are referred to as 3 year group (graduates of 3 years ago), 6 year group (graduates of 6 years ago), and 10 year group (graduates of 10 years ago). The 3 year graduates or group which most recently left school showed the highest number of replies or 45 per cent of the group. The 6 year and 10 year graduates followed respectively; the former showing replies of 35 per cent and the latter of 28 per cent. There being a marked difference of 17 per cent between the 3 year and the 10 year graduates; and only a 7 per cent difference between the 6 year and the 10 year graduates. This difference may signify the fact that, the more recently a group has graduated from school, the more active the group.

Obviously, this distribution means that if there is any carry-over from physical activities, it will be most evident in this group.

TABLE II

PHYSICAL ACTIVITIES PARTICIPATED IN BY 162
GRADUATES OF SALEM HIGH SCHOOL

Activity	No. Participants	Per cent
Basketball	104	64
Dancing	101	62
Setting up exercises	89	55
Volleyball	83	51
Bowling	78	48
Swimming & Diving	66	41
Softball	62	38
Bicycling	41	26
Winter Sports	37	23
Hiking	32	20
Roller Skating	31	19
Badminton	30	19
Tennis	22	14
Canoeing & Rowing	21	13
Horseback Riding	21	13
Ping Pong	16	10
Tumbling	15	9
Golf	6	4
Camping	5	3
Speedball	3	2
Archery	2	1
Baton Twirling	2	1
Lacrosse	1	.6
Field Hockey	1	.6
Track	1	.6
Fencing	1	.6
Passive (massage)	0	0

Table II shows the list of 27 activities which could possibly be a part of a school physical education program.

Of the possible 162 participants, basketball which appeared first, listed 104 participants, or 64 per cent of the entire group.

Dancing, referred to a school physical activity here, includes all types of dancing. Of the possible 162 participants 101 or 62 per cent were listed.

Setting up exercises and volleyball, approximately listing 50 per cent or more of the participants in each case, thus following respectively third and fourth on the list of activities.

The rest of the activities taper down in number and percentage of participants, with camping listing only 3; archery and baton twirling (extra-elective) 2 each; lacrosse, field hockey, track and fencing only 1 participant each; and passive (massage) with no participants.

Bowling, swimming and diving, softball, bicycling, winter sports, hiking, roller skating, badminton, tennis,canoeing and rowing, horseback riding, ping pong, tumbling and golf, or sports requiring high individual skill and technique, with the exception of hiking, were listed by very few participants. Thus indicating that those few were offered in some form of extra-school activities.

The significance of Table II is that basketball, dancing, setting up exercises and volleyball, which are usually listed

as group activities, except for dancing, comprised the greatest part of the physical education program. The tendency, therefore, being toward group rather than individual activity participation.

TABLE III

PERCENTAGE AND NUMBER OF STUDENTS, GRADUATING 10 YEARS AGO, WHO PARTICIPATED IN PHYSICAL ACTIVITIES

Activity	No. Participants	Per cent
Dancing	35	78
Basketball	34	76
Setting up exercises	32	71
Volleyball	28	62
Bowling	25	56
Softball	25	56
Swimming & Diving	15	33
Winter Sports	10	22
Hiking	9	20
Tennis	7	16
Bicycling	7	16
Roller Skating	7	16
Canoeing & Rowing	7	16
Tumbling	7	16
Ping Pong	7	16
Horseback Riding	6	13
Golf	3	7
Speedball	3	7
Badminton	2	4
Baton Twirling	2	4
Fencing	1	2
Archery	1	2
Camping	1	2
Lacrosse	1	2
Field Hockey	0	0
Track	0	0
Passive (massage)	0	0

Table III shows, of the possible 45 participants of the 10 year graduates, 35 or 78 per cent participated in dancing.

Basketball listed 34 or 76 per cent participants, only 1 participant less than dancing, thus appearing second on the list. Setting up exercises, with 32 or 71 per cent participating were listed third, with a difference of only 2 participants or 5 per cent from basketball, and 3 participants or 7 per cent difference from dancing which was listed first.

Volleyball, listing 28 or 62 per cent perticipants, appeared fourth on the list.

Bowling and softball both listed 25 or 56 per cent participants thus appearing next on the list.

Dancing, basketball, setting up exercises, volleyball, bowling and softball listed 50 per cent or more participants.

As compared to Table II, the same activities namely, dancing basketball, setting up exercises and volleyball appear in the top 50 per cent bracket.

The rest of the activities taper down in number and percentage similar to Table II.

Field hockey, track and passive (massage) had no participants listed.

In Table III as in Table II, it is justifiable to assume that group activities, except for bowling, comprised the greater part of the physical education program of 10 years ago. And those activities classified as individual activities or activi-

ties requiring high individual skill and technique for participation, were offered as extra-school activities.

TABLE IV

PERCENTAGE AND NUMBER OF STUDENTS, GRADUATING 6 YEARS AGO, WHO PARTICIPATED IN PHYSICAL ACTIVITIES

Activity	No. Participants	Per cent
Basketball.....	37	74
Setting up exercises....	29	58
Dancing.....	29	58
Volleyball.....	26	52
Bowling.....	20	40
Bicycling.....	14	28
Swimming & Diving.....	14	28
Softball.....	14	28
Winter Sports.....	13	26
Roller Skating.....	11	22
Tennis.....	10	20
Hiking.....	10	20
Badminton.....	9	18
Tumbling.....	5	10
Ping Pong.....	4	8
Canoeing & Rowling.....	3	6
Horseback Riding.....	3	6
Golf.....	2	4
Camping.....	2	4
Field Hockey.....	1	2
Fencing.....	0	0
Archery.....	0	0
Track.....	0	0
Lacrosse.....	0	0
Speedball.....	0	0
Passive (massage).....	0	0

Table IV shows basketball at the head of the list with 37 out of a possible 50 participants, or 74 per cent of the group.

Setting up exercises, dancing and volleyball follow in the order mentioned. All these listed 50 per cent or more participants.

Table IV as Table III, listed the same four group activities, namely basketball, setting up exercises, danding and volleyball, at the head of the list.

Listed within the range of 40 and 20 per cent participants were: bowling, bicycling, swimming and diving, softball, winter sports, roller skating, tennis and hiking. There is a choice as to which to these may classify as group or individual activities.

It is significant to note that there is a greater percentage participating in these activities than in the 10 year graduate group.

Except for badminton with 18 per cent participants, activities like horseback riding, golf, field hockey, fencing, archery, lacrosse, etc. still appear on the very bottom of the list with 1 per cent or no participants.

TABLE V

PERCENTAGE AND NUMBER OF STUDENTS, GRADUATING 3 YEARS AGO, WHO PARTICIPATED IN PHYSICAL ACTIVITIES

Activity	No. Participants	Per cent
Dancing	37	55
Swimming & Diving	37	55
Bowling	33	49
Basketball	33	49
Volleyball	29	43
Setting up exercises	28	42
Softball	23	34
Bicycling	20	30
Badminton	19	28
Winter Sports	14	21
Hiking	13	19
Roller Skating	13	19
Horseback Riding	12	18
Canoeing & Rowing	11	16
Tennis	5	7
Ping Pong	5	7
Tumbling	3	4
Camping	2	3
Golf	1	1
Archery	1	1
Track	1	0
Fencing	0	0
Field Hockey	0	0
Lacrosse	0	0
Speedball	0	0
Passive (massage)	0	0

TABLE V

PERCENTAGES AND NUMBER OF STUDENTS, GRADUATING 3 YEARS AGO, WHO PARTICIPATED IN PHYSICAL ACTIVITIES

Activity	No. Participants	Per cent
Bowling	27	38
Swimming & Diving	27	38
Golf	25	35
Basketball	23	32
Volleyball	20	28
Getting up early	20	28
Softball	19	27
Riding	18	25
Badminton	14	20
Minor Sports	14	20
Hiking	13	18
Roller Skating	13	18
Horseback Riding	12	17
Canoeing & Rowing	11	15
Tennis	5	7
Ping Pong	5	7
Dancing	3	4
Camping	2	3
Golf	1	1
Archery	1	1
Track	1	0
Fencing	0	0
Field Hockey	0	0
Lacrosse	0	0
Baseball	0	0
Passive (massage)	0	0

Table V shows changes in leading activities.

Dancing, swimming and diving, bowling and basketball appear as the first four activities, in the order listed.

Although dancing and swimming and diving each have 55 per cent participants; and bowling and basketball each have 49 per cent participants; it shows a more even distribution of participants.

Where bowling appeared fifth, with 40 per cent participants in Table IV, it now appears third, with 49 per cent participants. Swimming and diving in both, Table III and Table IV, appeared as seventh on the list with 28 and 33 per cent participants, whereas, it now appears second on the list with 55 per cent participants.

Volleyball and setting up exercises list 43 and 42 per cent participants respectively.

The following eight activities: softball, bicycling, badminton, winter sports, hiking, roller skating, horseback riding, and canoeing and rowing have an even distribution of participants. This may signify a slight change in the physical education program in the high school. It shows that the above were now available to the students as extra-electives either during school or after school hours.

However, the change is not significant enough, for, the same individual activities requiring more skill and technique for participants. Such activities are: track, fencing, field-

hockey, lacrosse, golf and archery.

ITEM

III. Type of present employment:

a. work ( ) what kind? _____

b. school now attending, if any? _____

There was a large variety of occupation (21) listed.

Since the group was small (162) the figures would have been too small to signify any meaning. Therefore, it was necessary to group them into the five most engaged in occupations. Students and duties housewives included as such.

1. Office work comprised all those individuals engaged in secretarial, bookkeeping, general office work, clerical, personnel and public relations positions.

2. Housewives, those married who have no outside employment.

3. Students with no employment.

4. Nursing, private and otherwise.

5. Teaching, any branch of the profession.

The tables which follow this explanation will give specific detail pertaining to Item III.

TABLE VI

NUMBER AND PERCENTAGE OF GRADUATES
WHO ARE EMPLOYED

Years Since Graduation	Employed		Unemployed	
	Number	Per cent	Number	Per cent
3	48	72	19	28
6	35	70	15	30
10	26	58	19	42
Total	109	68	53	32

Table VI shows that 68 per cent or more than half of the girls who graduated from high school are engaged in some form of occupation.

The unemployed group is less than half of the employed group and makes up 32 per cent of the graduates.

The earning power of these individuals may have some bearing on the type of activities they choose to engage in after working hours.

TABLE VII

FIVE MOST ENGAGED IN OCCUPATIONS
AS LISTED BY THE GRADUATES

OCCUPATIONS	NO. ENGAGED IN
1. Office work.....	61
2. Housewives.....	33
3. Students.....	16
4. Nursing.....	11
5. Teaching.....	10

Table VII shows 61 or 56 per cent of the entire employed group engaged in some type of office work.

Housewives and students together, comprised 45 per cent of this group.

Physical activities most engaged in by individuals in these occupations will be shown later in the study.

ITEM

IV. Are you a member of an athletic club?

If so where?_____What kind?_____

Of the entire 162 questionnaires 16 individuals answered Item IV in the affirmative. Half of these were students who were members of their school Woman's Athletic Associations.

Four individuals were members of Y. W. C. A. organizations in Boston and in Beverly (a nearby city to Salem). None listed their own city except as members of a Country Golf Club, Ski Busters (Salem Ski Club) and a bowling league.

ITEM

V. What type of physical activity now pursued (indicate preference in numerical order):

For example:
A person prefers tennis to golf, therefore check tennis (1), golf (2).

dancing	( )	Sailing	( )
tennis	( )	setting up exercise	( )
badminton	( )	horseback Riding	( )
golf	( )	speedball	( )
fencing	( )	basketball	( )
archery	( )	volleyball	( )
riflery	( )	tumbling	( )
bowling	( )	lacrosse	( )
bicycling	( )	field hockey	( )

Item V Concluded.

hiking	( )	camping	( )
roller skating	( )	winter sports	( )
swimming & diving	( )	ping pong	( )
track	( )	passive (massage)	( )
canoeing or rowing	( )	others	( )
		what? _____	

Item V will be specifically explained in the tables which follow.

Tables VIII, IX, & X will show in general, physical activities engaged in first for the three separate groups, and then for the entire group of 162 graduates.

These will be comparable to tables of Item II, which were tabulated for each group while in high school.

TABLE VIII

NUMBER AND PERCENTAGE OF GRADUATES, OF 10 YEARS AGO

ENGAGED IN PHYSICAL ACTIVITIES

AT THE PRESENT TIME

Activity	No. Participants	Per cent
Dancing	37	82
Bowling	34	76
Swimming & Diving	32	71
Winter Sports	20	44
Tennis	18	40
Hiking	17	38
Golf	15	33
Ping Pong	15	33
Sailing	14	31
Bicycling	13	29
Horseback Riding	12	27
Roller Skating	8	18
Setting up exercises	7	15
Canoeing or Rowing	6	13
Camping	5	11
Badminton	4	9
Basketball	2	4
Fencing	1	2
Field Hockey	1	2
Track	1	2
Volleyball	1	2
Archery	0	0
Softball	0	0
Speedball	0	0
Lacrosse	0	0
Passive (massage)	0	0

Table VIII shows dancing first on the list of physical activities with 82 per cent participants, who were graduated from high school 10 years ago.

Bowling with 76 per cent participants appears second on the list.

Swimming and diving with 71 per cent is third.

Winter sports, tennis, hiking, golf, ping pong, sailing, bicycling, and horseback riding follow with an evenly tapered distribution of participants, ranging from 44 per cent for winter sports to 27 per cent for horseback riding.

Fencing, field hockey, track, volleyball, archery, softball, speedball, lacrosse and passive (massage) appear with one or no participants listed.

In comparing Table VIII (10 year graduates) with Table III (students 10 years ago), it is interesting to note dancing, first on the list with 82 per cent participants at the present time, and Table III listing the same activity in equal place with 78 per cent participants.

Four per cent more graduates participate in the activity at the present time than did while attending high school.

Bowling with 56 per cent participants in high school now appears as second on the list with 76 per cent participants. Notice a 20 per cent difference in participants.

Swimming and diving with 33 per cent participants in high school lists 71 per cent participants in Table VIII.

Winter sports with 22 per cent participants in Table III lists 44 per cent participants in Table VIII.

Tennis which appeared tenth with 16 per cent in Table III, lists 40 per cent participants in Table VIII.

Basketball with 76 per cent participants in Table III lists only 4 per cent participants in Table VIII. This may be an indication of the lack of facilities in the community.

The marked differences in percentages in Table VIII as compared to Table III may imply:

(1) That individuals tend to do those things with which they are most familiar.

(2) That individuals show an interest in and participate in physical activities even after graduation from high school.

(3) That being out of school employed (58 per cent of this group) may be an indication of the type of activity individuals engage in.

(4) That individuals tend toward individual rather than group activity after leaving school.

TABLE IX

NUMBER AND PERCENTAGE OF GRADUATES, OF 6 YEARS AGO ENGAGED IN PHYSICAL ACTIVITIES AT THE PRESENT TIME

Activity	No. Participants	Per cent
Bowling	42	84
Dancing	40	80
Swimming & Diving	37	74
Bicycling	32	64
Hiking	23	46
Winter Sports	23	46
Tennis	22	44
Roller Skating	22	44
Horseback Riding	18	36
Canoeing or Rowing	15	30
Ping Pong	12	24
Sailing	12	24
Golf	10	20
Basketball	10	20
Setting up exercises	8	16
Badminton	7	14
Camping	5	10
Volleyball	4	8
Archery	2	4
Field Hockey	2	4
Fencing	1	2
Track	1	2
Softball	1	2
Speedball	1	2
Tumbling	1	2
Riflery....(extra)	1	2
Lacrosse	0	0
Passive....(massage)	0	0

Table IX shows approximately 84 per cent graduates, of 6 years ago as present participants in bowling; 80 per cent participants in dancing; swimming and diving 74 per cent participants; and bicycling with 64 per cent participants.

Hiking, winter sports, tennis, roller skating, horseback riding and canoeing or rowing range from 46 per cent to 30 per cent participants.

Physical activities listing 1 or no participants are: fencing, track, softball, speedball, tumbling, riflery, lacrosse and passive (massage).

In comparing Tables IX and IV (6 year group) it is interesting to note the difference in the percentage of participants in bowling which now appears first on the list with 84 per cent, and as fifth on the list with 40 per cent participants 6 years ago. Dancing, second with 80 per cent participants, as compared to third on the list with 58 per cent participants in Table IV. Swimming and diving, third with 74 per cent participants as compared to seventh on the list with 28 per cent participants.

Bicycling, hiking, winter sports, tennis, roller skating, horseback riding and golf all show a significant difference in the percentage of participants as compared to Table IV, for the same group and the same activities.

On the other hand, the physical activities with the lowest percentage of participants is approximately identical in

both tables.

Of significance is the evidence that there is a greater percentage of participants in the group which graduated 6 years ago than in the group which graduated 10 years ago.

TABLE X

NUMBER AND PERCENTAGE OF GRADUATES, OF 3 YEARS AGO ENGAGED IN PHYSICAL ACTIVITIES AT THE PRESENT TIME

Activity	No. Participants	Per cent
Dancing	53	79
Swimming & Diving	44	66
Bowling	42	63
Roller Skating	30	45
Horseback Riding	30	45
Bicycling	28	42
Tennis	19	28
Hiking	16	24
Sailing	15	22
Ping Pong	13	19
Canoeing or Rowing	13	19
Winter Sports	12	18
Badminton	11	16
Golf	10	15
Setting up exercises	10	15
Basketball	10	15
Volleyball	8	12
Archery	6	9
Camping	5	7
Riflery	4	6
Field Hockey	3	4
Softball	1	1
Speedball	1	1
Soccer	1	1
Fistball(extra)	1	1
Fencing	0	0
Track	0	0
Lacrosse	0	0
Passive (massage)	0	0

Table X shows dancing at the top of the list with 79 per cent participants; swimming and diving, second with 66 per cent participants; bowling, third with 63 per cent participants.

Listed between 45 per cent and 22 per cent participants are: roller skating, horseback riding, bicycling, tennis, hiking and sailing. Whereas, softball, speedball, soccer, fistball, fencing, track, lacrosse and passive (massage) list one or no participants.

In comparing Tables X and V(for 3 year group) of significant importance is the fact that the same three physical activities, dancing, swimming and diving, and bowling appear on the top of the list with a marked increase of percentage of participants in each case. Dancing shows an increase of approximately 24 per cent of participants; swimming and diving with an increase of approximately 11 per cent; and bowling with an increase of approximately 14 per cent participants.

Although examples are taken from only three physical activities these show that individuals who participated in them during high school still enjoy and engage in them three years after graduation.

The increased percentages of participants in Table X signify this as the most active and most interested group.

TABLE XI

NUMBER AND PERCENTAGE OF GRADUATES

PARTICIPATING IN VARIOUS PHYSICAL ACTIVITIES

AT THE PRESENT TIME

Activity	No. Participants	Per cent
Bowling	118	73
Swimming & Diving	113	70
Dancing	100	62
Bicycling	73	45
Roller Skating	60	37
Horseback Riding	60	37
Tennis	59	36
Hiking	56	35
Winter Sports	55	34
Sailing	41	25
Ping Pong	40	25
Golf	35	22
Canoeing or Rowing	34	21
Setting up exercises	25	15
Basketball	22	14
Badminton	22	14
Camping	15	9
Volleyball	13	8
Archery	8	5
Field Hockey	6	4
Riflery	5	3
Fencing	2	1
Track	2	1
Softball	2	1
Speedball	2	1
Tumbling	1	.6
Soccer	1	.6
Fistball	1	.6
Passive (massage)	0	0

Table XI shows the physical activities in which the 162 graduates as a whole engaged in at the present time.

Unlike Table II (in high school), Table XI lists bowling swimming and diving, dancing and bicycling as the top four activities. All four activities may be classified as individual activities.

Of the four activities in Table XI, dancing was the only one listed among the first four in Table II.

Bowling which appeared number five in Table II now appears as number one in Table XI.

Roller skating, horseback riding, tennis, hiking, winter sports, sailing, ping pong, golf and canoeing or rowing have almost double the percentage in Table XI as compared to their percentage in Table II.

Whereas, setting up exercises with a 55 per cent in Table II has a 15 per cent in Table XI. Similarly, basketball which had the highest, or 64 per cent in Table II now is listed as 14 per cent in Table XI.

The assumption being that, since both are more or less classified as group activities, they are no longer preferred. However, it may be due to the fact that city facilities are not available for such group activity participation.

Since 15 and 14 per cent of the group have reported participation in these 2 activities it is noticeable enough to say that there is some carry-over value in these group

activities regardless of how small it is.

TABLE XII

10 HIGHEST RANKING PHYSICAL ACTIVITIES

PARTICIPATED IN BY GRADUATES

Activity	1	2	3	4	5	6	7	8	9	10	Total	Per cent
Dancing	59	29	17	5	6	6	3	2	-	-	127	86
Bowling	25	24	13	19	8	13	8	2	-	-	112	76
Swimming & Diving	25	24	18	17	7	3	2	3	2	5	106	72
Bicycling	3	11	15	6	12	5	6	4	-	-	62	42
Winter Sports	6	5	4	6	10	8	10	4	3	4	60	41
Horseback Riding	5	6	8	9	9	6	4	5	3	2	57	39
Roller Skating	2	-	10	8	11	10	3	4	6	1	55	37
Tennis	5	9	13	8	7	8	4	-	-	-	54	37
Hiking	2	4	9	10	9	3	7	5	3	-	52	35
Sailing	3	5	7	6	8	3	3	5	1	1	42	29

15 questionnaires either misunderstood or did not participate in activities, thus the table is based on 147 instead of 162.

Table XII shows the physical activities most engaged in according to individual choice.

Dancing ranked highest for first, second and third choice. Very few listed it as ninth or tenth, thus signifying that dancing is a favorite activity and is enjoyed by many girls.

Bowling followed as a choice physical activity among girls, with 25 girls choosing it in first place, 24 in the second place, 13 in the third place and 19 in the fourth place. Never chosen in the ninth or tenth place.

Swimming and diving ranked almost identical to bowling,

except that it was listed in the ninth and tenth place although not by many.

Bicycling was a third place favorite by choice, showing largest figures in second, third and fifth places. It was never chosen as a ninth or tenth place activity by choice of participants, thus denoting its importance in recreation in after school years.

Winter sports and horseback riding rank about the same, choisest in the third through the seventh place.

Although roller skating ranked choisest in the third through the sixth place, it failed as a first and second choice.

Tennis ranked highest in the third place and tapered down evenly in the fourth through the seventh place, listing none in the last three places.

Hiking and sailing ranked highest in the third, fourth and fifth places.

Appropriately comparable at this time are Tables XII and II (while in high school). Of significant importance is the fact that dancing which almost always appeared as one of the four most highly participated in activity in school also appeared in almost identical place for present time participation, ranking first in the list of the ten highest ranking physical activities.

Bowling, the next choicest activities among girls appeared fifth on the list according to high school participation with

48 per cent participants.

According to Table XII, bowling now shows 76 per cent participants.

Swimming and diving, third according to choice by graduates appeared sixth with 41 per cent participants in high school. Table XII shows 72 per cent participants.

In every instance the physical activities in Table XII ranked higher in percentage of participants than in Table II.

The graduates not only participated in these physical activities after high school but, almost in every instance the percentage of participants was almost doubled.

TABLE XIII

5 HIGHEST PHYSICAL ACTIVITIES AS PARTICIPATED IN BY GRADUATES IN 5 TYPES OF EMPLOYMENT AND OCCUPATIONS

Occupation	1	2	3	4	5
Office work	dancing	bowling	swimming & diving	bicycling	roller
Housewives	dancing	swimming & diving	bowling	hiking	horse-back riding
Students	dancing	swimming & diving	basketball	badminton	bowling
Nursing	bowling	tennis	bicycling	swimming & diving	dancing
Teaching	dancing	bowling	tennis	swimming & diving	winter sports

Table XIII shows dancing as the choice activity of individuals in four of the listed occupations. It appeared fifth in nursing.

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Teaching	dancing	bowling	tennis	swimming & diving	winter sports

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Bowling was a second choice with swimming and diving a third choice.

Bicycling, hiking, badminton, basketball, horseback riding, winter sports and roller skating seemed to appear on the very end for most individuals except for basketball and tennis.

The indication of Table XIII is that individuals engaged in these occupations are quite active.

ITEM VI If no active physical activity is taken, please state reason_____

Majority of the individuals did not answer Item VI which would be an indication that they indulged in some form of physical activity. Fifteen stated reasons for non-indulgence and of these 15 only 2 are incapacitated to indulge in any form of physical activity.

Those who are married answered in most instances that they were too busy at home to seek outside activity other than social gatherings. Lack of city facilities to provide such activity was another mentioned reason for non-participation.

ITEM VII If present activities were not learned in high school, where were they learned?_____

Majority did not answer therefore the indication is that they received some instruction for the activity in which they

participate in while attending high school.

Students invariably answered that they learned the activity from friends. And others stated that they learned the activity on their own not stating whether it was by privately paid instruction or otherwise.

ITEM
VIII. Signature,_____: If desired.

Although optional, majority signed the returned questionnaire. A few volunteered comments on the purpose of such a study.

CHAPTER VI

Discussion of Data

Before drawing any final conclusions it seems fitting to discuss a few factors.

First of all, the entire study was based upon the information received in the letter and questionnaire which were distributed to graduates of Salem High School.

The distribution of these was purposely limited to three graduated classes in order to reveal the most interested and active group so no follow-up of the letter and the questionnaire was made.

Keeping the above factors in mind so far as possible, the response was enough to continue the study. The assumption being that unless an individual was interested, indulged or cared to indulge in any type of physical activity she would not bother with the questionnaire. Therefore, one may consider attitude[1] as a contributing factor to the extent of replies received.

On this assumption the three year group, or graduates who left school three years ago, was revealed as the most active group. The six year group followed and the ten year group was the last.

Activities like dancing (referred to as any type of dancing, square, tap, ballroom, modern, etc.), basketball,

1/ Agnes Wayman. "What to Measure in Physical Education" Research Quarterly, (May, 1930) 1;101

setting up exercises and volleyball comprised the greatest part of the physical education program in high school. Except for bowling and swimming and diving which were evidently a part of the program for the three year group, individual sports (opinions of physical educators may vary in regard to these) were a part of a very light extra-school activity program in all three classes.

The slight tendency to the change of these activities indicates that there was a need for a revised program. Table XII, a table of preferance, was a further indication of the above statement.

If this is true, was there any carry-over in the previously mentioned activities?

The answer will be given in the list of conclusions based upon the argument that, the above group made up only 45 per cent of the replies received. And that did not quite make the final decision. Also let us decide from the following 10 activities, six of which were taken from Table II (p 12).

Activity	Before	After
* Basketball	64 per cent	14 per cent
* Dancing	62 " "	62 " "
* Bowling	48 " "	73 " "
* Swimming & Diving	41 " "	70 " "
* Bicycling	26 " "	45 " "
Roller Skating	19 " "	37 " "
Horseback Riding	13 " "	37 " "
Setting up exercises	55 " "	15 " "
* Volleyball	51 " "	8 " "
Winter Sports	23 " "	34 " "

* Listed as the top 10 activities while in high school.

Boston University
School of Education
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Judging from the preceeding comparison of activities like basketball, setting up exercises, and volleyball one could almost say that the purpose of this study was in vain. True, except for the fact that the percentages of the other activities are large enough not to be passed off lightly. And in keeping in mind the meaning of carry-over as referred to earlier in the study (Chapter I), it is a further indication of their importance.

According to preferance, the ten highest ranking activities (Table XII), tend again toward individual rather than group activity. This may be the result of the 68 per cent of graduates who are employed. Since this group has a greater amount of funds available, it could easily engage in those activities like tennis, badminton, golf, fencing, archery, horseback riding, winter sports etc.. However, there is evidence that employment was not wholly a controlling factor because dancing, bowling, swimming and diving, tennis, basketball and hiking were among the favorite five activities chosen regardless of conditions, individuals tend to do those things they most enjoy and are most familiar with.[1]

If individuals had no means of acquiring some form of recreation in their own hours they would seek pay for it. Their earning power could play an important part through commercialized recreation,[2] and this is not an entirely

1/ American Association of School Administrators, op. cit pl31
2/ Ibid. p 6

desirable situation. On the other hand there is a possibility that if there were available to the citizens, a city wide and city administered recreation program there would be a change in choice and participation of physical activities, depending upon how extensive was the program, of course.1/

The responses in Item VII do not in any way indicate that the activities in which they participate at the present time were learned in a local community house, center or club. Besides learning some of these in school there was a large number learned elsewhere. To this we may take the answer frequently used as, learned from friends, without any further details. This we may assume to be most anywhere, and so, many may have sought recreation in other surrounding cities. Answers to Item VI are a further indication of the lack of a city program and facilities.

The need for a revised high school physical educational program may further be indicated by the voluntary comments in the questionnaire. Some of those comments read as follows:

> "Why don't you start a program similar to the one held at the Beverly 'Y' for girls and women?"
>
> "I have never learned how to swim but wish it were a 'must' in physical exercise. I believe there are quite a few people like me."
>
> "I feel that the system of physical education used while I attended Salem High was very inadequate, and also uninteresting."

1/ D. P. Cottrell. In John Dewey Yearbook, 1940 p. 228

"I think it would be a good idea if at high school classes could be held that would enable a person to become more accomplished in sports that are used after school and do not take a team to play. Such as, swimming, bowling, dancing (modern dance too) tennis, sailing, skiing, ping pong. I realize that many of these sports would have to be taken up outside school but could be set up as a club, and one could receive club credit for attending the class."

"The revision of the high school physical education program sounds ideal."

CHAPTER VII

Conclusions

Upon the tabulation and interpretation of the data in the study the following conclusions were drawn:

1. Girls tend toward individual rather than group activity participation.
2. Employment or earning power does not necessarily control or indicate the type of physical activities individuals engage in.
3. There is a definite carry-over of physical activities from high school to adult life, regardless of how small it may be.
4. The carry-over is most significant in the group most recently graduated from high school. Therefore, the fewer years a group is out of school the more active the group for instance, the group which graduated three years ago is the most active, the six year group less active and the ten year group the least active and thus the degree of carry-over is in direct proportion with the number of years that individuals were out of school.
5. There is an indication for a need of a revised physical education program in the high school and a city wide recreation program.
6. Graduates do not mention participation nor having learned any physical activities in any local recreation center therefore the conclusion that there is no active program.

CHAPTER VIII

Recommendations

The scope of this study brings forth the following suggestions and recommendations:

1. It is recommended that a city wide survey be made to reveal a broader view of the need of a recreation program; the extent of such a program; and what type of activities individuals prefer in such a program.
2. A committee should be appointed to study the need and the revision of the girls' physical education program in the high school; to include more instruction in those activities which students prefer.
3. Study closely the high school facilities for the physical education program to disclose whether or not they are being utilized to the utmost, if not make the necessary provisions to carry on a more extensive program.

Please check carefully and mail in enclosed envelope by October 20th 1947.

Questionnaire

1. How many years since graduation from high school?____ yrs.

2. Did you participate in any physical activity in high school? Yes ( ) No ( )
If yes, what physical activities?

Please check in Parenthesis

dancing	( )	Canoeing or rowing	( )
tennis	( )	setting up exercises	( )
badminton	( )	horseback riding	( )
golf	( )	speedball	( )
fencing	( )	basketball	( )
archery	( )	volleyball	( )
bowling	( )	softball	( )
bicycling	( )	tumbling	( )
hiking	( )	lacrosse	( )
roller skating	( )	winter sports	( )
swimming & diving	( )	ping pong	( )
field hockey	( )	passive (massage)	( )
track	( )	others	( )
camping	( )	What?_____	

3. Type of present employment:
a work ( ) what kind _____
b school now attending if any?_____

4. Are you a member of an athletic club?
If so where?_____ What kind?_____

5. What type of physical activity now pursued (indicate preference in numerical order):

For example:
A person prefers tennis to golf, therefore check tennis (1) and golf (2).

dancing	( )	canoeing or rowing	( )
tennis	( )	sailing	( )
badminton	( )	setting up exercises	( )
golf	( )	horseback riding	( )
fencing	( )	speedball	( )
archery	( )	basketball	( )
riflery	( )	volleyball	( )
bowling	( )	tumbling	( )
hiking	( )	lacrosse	( )

Questionnaire Concluded:

bicycling	( )	field hockey	( )
roller skating	( )	camping	( )
swimming & diving	( )	winter sports	( )
track	( )	ping pong	( )
		passive (massage)	( )
		others	( )
		what?	_____

6. If no active physical activity is taken, please state reason_____

7. If present activities were not learned in high school, where were they learned?_____

_____

8. Signature,_____: If desired.

Thank you

OFFICE OF PRINCIPAL
CLASSICAL AND HIGH SCHOOL
SALEM, MASSACHUSETTS

October 14, 1947

Dear Graduate:

In connection with a course which I am now pursuing at Boston University, I am making a survey of the physical activities now engaged in by Salem High School Graduates.

Its primary purpose is toward a revision of the physical education program in the High School and a future city-wide recreation program.

Your co-operation in checking the enclosed questionnaire at your earliest convenience will be greatly appreciated.

Please return in enclosed envelope no later than October 20, 1947.

Thanking you, I remain

Yours very truly,

Victoria T. Kopaczynska

Physical Instructor

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